

4-1.3 DECISION NO. D-23

DENTAL SHIELDING

Issue:

Guidelines are needed to ensure that Indian Health Service (IHS) dental clinics comply with the recommendations of the National Council on Radiation Protection and Measurements (NCRP). A number of IHS dental clinics were constructed without appropriate design of radiation barriers. An evaluation of a recently constructed ambulatory health care facility revealed insufficient shielding between adjacent dental operatories where only modular cabinets constructed of particle board were used to separate dental operatories. While conventional building materials in partitions, floors, and ceilings may provide sufficient radiation shielding, each dental clinic design must be evaluated using standards of the NCRP. Factors which determine the need for additional shielding include workload, use factors, occupancy, maximum permissible dose equivalent, etc. New construction or major renovation of existing facilities should include funding for design review by a board certified medical physicist. Existing facilities will generally be evaluated by IHS, Division of Environmental Health (DEH) field staff. The Area Institution Environmental Health (IEH) Officer (for those areas with such position) may assist in determining if the design is correct. A formal barrier survey may be conducted by the IHS Area IEH Officer after construction if there are concerns about the design or quality of the construction.

Decision:

Effective immediately, NCRP Report No. 49, Structural Shielding Design and Evaluation for Medical Use of X-Rays and Gamma Rays of Energies up to 10 MeV, dated 1976, and NCRP Report No. 35, Dental X-Ray Protection, dated 1970, will apply to all Indian Health Service dental clinics. The design application based on the two NCRP reports will be done on a case by case basis (each dental clinic design must be evaluated using standards of NCRP Report No. 35 and/or 49).

Reference:

The NCRP guidelines are incorporated in the Technical Handbook for Environmental Health and Engineering, Volume III, Part 21, Chapter 21-2.3, Dental Shielding, by reference only. Copies of the NCRP reports can be obtained, for a fee, from the NCRP, 7910 Woodmont Avenue, Suite 800, Bethesda, MD. 20814-3095, or call (301) 657-2652 or (800) 229-2652, and fax number (301) 907-8768.

Adopted by HFAC on May 8, 1996.

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